

REMARKS

Applicant has received and carefully reviewed the Final Office Action of the Examiner mailed September 13, 2006. Currently, claims 5-22 and 24-34 remain pending. Claims 5-22 and 24-34 have been rejected. Favorable consideration of the following remarks is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 5, 11-13, 20-22, 24-26, and 28-33 were rejected under 35 U.S.C. §102(b) as being anticipated by Lundquist (US Patent No. 5,329,923). After careful review, Applicant respectfully disagrees.

Turning to claim 5, which recites:

5. A catheter having a torque transmitting shaft, comprising:
an elongate shaft having a proximal end, a distal end, a lumen extending therethrough, a core member having a proximal end and distal end, an inner surface, and an outer surface, wherein the inner surface is in fluid communication with the lumen; and
a *raised pattern* of generally noncontiguous elements *disposed on the outer surface*, the *raised pattern* further comprising a plurality of bearing points, wherein the bearing points are separated when the shaft is not being torqued and wherein at least two of the bearing points move toward one another when the shaft is torqued; and
wherein the *raised pattern* improves the transmission of torque along the elongate shaft. (Emphasis added.)

Nowhere does Lundquist teach or disclose, “a raised pattern of generally noncontiguous elements disposed on the outer surface” as recited in claim 5. The Final Office Action states claims 5, 12, 25 and 32, as currently written, can be interpreted broadly that the Lundquist reference at least discloses slot 41 in Figure 4 can be equivalent as a raised pattern of generally noncontiguous element disposed on the outer surface 37 which would fit the descriptive of term “raised pattern” as recited. While Applicant agrees that during patent examination, the pending claims must be given their broadest reasonable interpretation in light of the specification, Applicant does not believe that “raised pattern” can be reasonably interpreted to mean slots, as stated in the Office Action.

In essence, the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Accordingly, “*raised pattern...disposed on the outer surface*” cannot be reasonably interpreted to mean “a plurality of slots 41 which extend through the cylindrical wall 36.” (Column 5, lines 9-10). The descriptive nature of “*raised*” means above or projecting above the surrounding surface. Additionally, the “*raised pattern*” is disposed “*on*” the outer surface. Accordingly, the claimed pattern is to be projecting above the outer surface of the elongate shaft.

Lundquist discloses a pattern in the wall of the tubular member using slots. However, this pattern does not project above the surrounding surface of the tubular member, but, in contrast, the pattern is the surface of the tubular member. Therefore, the slots of Lundquist forming a pattern are not a “*raised pattern...disposed on the outer surface*”, as recited in claim 5.

Additionally, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Lundquist does not teach a “*raised pattern...disposed on the outer surface*” and therefore does not anticipate claim 5. Therefore, for reasons given above as well as others, claim 5 is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claim 11, which depends from claim 5 and includes significant additional limitations, is believed to be allowable over Lundquist and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 12, which recites:

12. A method of generating torque transmittance within a catheter shaft, comprising the steps of:
 providing a catheter comprising an elongate shaft having an outer surface; and
 disposing a *raised pattern on the outer surface*,
 wherein the raised pattern forms means for improving the transmission of torque along the elongate shaft; and
 wherein the *raised pattern* comprises a plurality of generally noncontiguous *raised shapes*, adjacent raised shapes being separated when the shaft is not under torque and at least two adjacent raised shapes move toward each other when the shaft is under torque. (Emphasis added.)

As discussed above, nowhere does Lundquist teach or suggest “disposing a raised pattern on the outer surface” as recited in claim 12. For similar reasons state above as well as others, claim 12 is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claims 13, 20-22 and 24, which depend from claim 12 and include significant additional limitations, are believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 25, which recites:

25. A catheter having a torque transmitting shaft, comprising:
an elongate shaft having an outer surface; and
a *raised pattern* comprising a plurality of generally noncontiguous *raised elements disposed on the outer surface*, wherein each of the plurality of elements is free from adjacent raised elements when the shaft is not under torsion and wherein at least two adjacent *raised elements* deflect toward one another when the shaft is under torsion. (Emphasis added.)

As discussed above, nowhere does Lundquist teach or suggest “a *raised pattern* comprising a plurality of generally noncontiguous *raised elements disposed on the outer surface*” as recited in claim 25. For similar reasons state above as well as others, claim 25 is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claims 26 and 28-31, which depend from claim 25 and include significant additional limitations, are believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 32, which recites:

32. A catheter having a torque transmitting shaft, comprising:
an elongate shaft having wall defining an inner surface and an outer surface;
a plurality of *raised elements integral with and extending from the outer surface*, wherein adjacent *raised elements* are separated when the shaft is not under torsion and wherein at least two adjacent *raised elements* deflect toward one another when the shaft is under torsion. (Emphasis added.)

As discussed above, nowhere does Lundquist teach or suggest “a plurality of *raised elements integral with and extending from the outer surface*” as recited in claim 32. For similar reasons state above as well as others, claim 32 is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claim 33, which depends from claim 32 and includes significant additional limitations, is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Claims 5, 12, 25, 27, 32 and 34 were rejected under 35 U.S.C. §102(b) as being anticipated by Tittel (US Patent No. 4,465,482). After careful review, Applicant respectfully disagrees.

Turning to claim 5, which recites:

5. A catheter having a torque transmitting shaft, comprising:
 - an elongate shaft having a proximal end, a distal end, a lumen extending therethrough, a core member having a proximal end and distal end, an inner surface, and an outer surface, wherein the inner surface is in fluid communication with the lumen; and
 - a *raised pattern* of generally noncontiguous elements *disposed on the outer surface*, the *raised pattern* further comprising a plurality of bearing points, wherein the bearing points are separated when the shaft is not being torqued and wherein at least two of the bearing points move toward one another when the shaft is torqued; and
 - wherein the *raised pattern* improves the transmission of torque along the elongate shaft. (Emphasis added.)

Nowhere does Tittel teach or disclose, “a raised pattern of generally noncontiguous elements disposed on the outer surface” as recited in claim 5. The Final Office Action states claims 5, 12, 25 and 32, as currently written, can be interpreted broadly that the Tittel reference discloses a raised pattern of generally noncontiguous element disposed on the outer surface. The Final Office Action references Figure 2 to illustrate the raised pattern. Similar to above, while Applicant agrees that during patent examination, the pending claims must be given their broadest reasonable interpretation in light of the specification, Applicant does not believe that “raised pattern” can be reasonably interpreted to mean slots or openings in a tube.

Accordingly, Applicant believes that “*raised pattern...disposed on the outer surface*” cannot be reasonably interpreted to mean diamond-shaped perforations in the tube wall. (Column 1, lines 58-61). As discussed previously, the descriptive nature of “raised” means above or projecting above the surrounding surface. Additionally, the “raised pattern” is disposed “on” the outer surface. Accordingly, the claimed pattern is to be projecting above the outer surface of the elongate shaft.

Tittel discloses a plurality of diamond-shaped perforations or openings in a tube.

Nowhere does Tittel teach or suggest the pattern projecting above the surface of the tubular member, which it is disposed on. Therefore, the perforations disclosed by Tittel do not anticipate a “raised pattern...disposed on the outer surface”, as recited in claim 5. Therefore, for reasons given above as well as others, claim 5 is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claim 11, which depends from claim 5 and includes significant additional limitations, is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 12, which recites:

12. A method of generating torque transmittance within a catheter shaft, comprising the steps of:
providing a catheter comprising an elongate shaft having an outer surface; and
disposing a raised pattern on the outer surface,
wherein the raised pattern forms means for improving the transmission of torque along the elongate shaft; and
wherein the *raised pattern* comprises a plurality of generally noncontiguous *raised shapes*, adjacent raised shapes being separated when the shaft is not under torque and at least two adjacent raised shapes move toward each other when the shaft is under torque. (Emphasis added.)

Nowhere does Tittel teach or suggest “disposing a raised pattern on the outer surface” as recited in claim 12. For similar reasons state above as well as others, claim 12 is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 25, which recites:

25. A catheter having a torque transmitting shaft, comprising:
an elongate shaft having an outer surface; and
a *raised pattern* comprising a plurality of generally noncontiguous *raised elements disposed on the outer surface*, wherein each of the plurality of elements is free from adjacent raised elements when the shaft is not under torsion and wherein at least two adjacent *raised elements* deflect toward one another when the shaft is under torsion. (Emphasis added.)

Nowhere does Tittel teach or suggest “a *raised pattern* comprising a plurality of generally noncontiguous *raised elements disposed on the outer surface*” as recited in claim 25. For similar reasons state above as well as others, claim 25 is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claim 27, which depends from claim 25 and includes significant additional limitations, is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Turning to claim 32, which recites:

32. A catheter having a torque transmitting shaft, comprising:
an elongate shaft having wall defining an inner surface and an outer surface;
a plurality of *raised elements integral with and extending from the outer surface*, wherein adjacent *raised elements* are separated when the shaft is not under torsion and wherein at least two adjacent *raised elements* deflect toward one another when the shaft is under torsion. (Emphasis added.)

Nowhere does Tittel teach or suggest “a plurality of *raised elements integral with and extending from the outer surface*” as recited in claim 32. For similar reasons state above as well as others, claim 32 is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Additionally, for similar reasons as well as others, claim 34, which depends from claim 32 and includes significant additional limitations, is believed to be allowable over Tittel, and Applicant respectfully requests withdrawal of the rejection.

Rejections under 35 U.S.C. § 103

Claims 6-10 and 15-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lundquist (US Patent No. 5,329,923). After careful review, Applicant respectfully traverses the rejection. For similar reasons given above as well as others, claims 6-10, which depend from claim 5 and include significant additional limitations, and claims 15-19, which depend from claim 12 and include significant additional limitation, are believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lundquist in view of Moore et al. (US Patent No. 4,669,465). After careful review, Applicant respectfully traverses the rejection. For similar reasons given above as well as others, claim 14, which depends from claim 12 and includes significant additional limitations, is believed to be allowable over Lundquist, and Applicant respectfully requests withdrawal of the rejection.

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

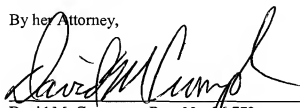
Respectfully submitted,

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By her Attorney,

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11/13/06



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